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Attorney Docket No.: 018623-013910

Assistant Commissioner for Patents Washington, D.C. 20231

TOWNSEND and TOWNSEND and CREW LLP

TECH CENTER 1600/2900

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

ALESSANDRO SETTE et al.

Application No.: 09/350,401

Filed: July 8, 1999

For: INDUCING CELLULAR IMMUNE RESPONSES TO HEPATITIS B VIRUS USING PEPTIDE AND NUCLEIC ACID

COMPOSITIONS

Examiner:

R. Schwadron

Art Unit:

1644

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR §1.97 and

§1.98

Assistant Commissioner for Patents Washington, D.C. 20231

Sir:

The references cited on attached form PTO-SB/08A and PTO-SB/08B are being called to the attention of the Examiner. Copies of the references are enclosed; however copies of the U.S. Patents are not enclosed as they were originally filed with the corresponding parent application, USSN 09/239,043. Also enclosed is a copy of the International Search Report corresponding to a related PCT application. It is respectfully requested that the cited references be expressly considered during the prosecution of this application, and the

ALESSANDRO SETTE et al. Application No.: 09/350,401

Page 2

references be made of record therein and appear among the "references cited" on any patent to issue therefrom.

As provided for by 37 CFR 1.97(g) and (h), no inference should be made that the information and references cited are prior art merely because they are in this statement and no representation is being made that a search has been conducted or that this statement encompasses all the possible relevant information.

Applicant believes that <u>no fee is required</u> for submission of this statement, since it is being submitted prior to the issuance of the first Office Action on the merits. However, if a fee is required, the Commissioner is authorized to deduct such fee from the undersigned's Deposit Account No. 20-1430. Please deduct any additional fees from, or credit any overpayment to, the above-noted Deposit Account.

Respectfully submitted,

Jean M. Lockyer' Reg. No. 44,879

TOWNSEND and TOWNSEND and CREW LLP Two Embarcadero Center, 8th Floor San Francisco, California 94111-3834

Tel: 415-576-0200 Fax: 415-576-0300

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 5

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Application Number	09/350,401
Filing Date	July 8, 1999
First Named Inventor	AUG 0 3 2011
Group Art Unit	1644 TCO.
Examiner Name	R. Schwadron CH CENTER 1600 2000
Attorney Docket Number	018623-013910US

			U.S. PATENT DOCUM	MENTS	
Examiner Initials *	Cite No.1	Number Kind Code ² (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	AA	4,428,941	Galibert et al.	31 Jan. 1984	
	AB	4,599,230	Milich and Chisari	8 July 1986	
	AC	4,599,231	Milich and Chisari	8 July 1986	
	AD	4,818,527	Thornton et al.	4 Apr. 1989	
	AE	4,882,145	Thornton et al.	21 Nov. 198	
	AF	5,017,558	Vyas	21 May 1991	
	AG	5,019,386	Machida and Nakamura	28 May 1991	
-	AH	5,039,522	Neurath	13 Aug. 1991	
	Al	5,143,726	Thornton et al.	1 Sept. 1992	
	AJ	6,037,135	Kubo et al	14 Mar. 2000	
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Examiner Initials*	Cite No. ¹	For Office ³	eign Patent Do	cument Kind Code ⁵ (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁶
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Sheet 2 of 5

	Complete if Known	RES
Application Number	09/350,401	
Filing Date	July 8, 1999	
First Named Inventor	Tro	40G (C)
Group Art Unit	1644	2001
Examiner Name	R. Schwadron	UE/VIED 100/
Attorney Docket Number	018623-013910US	1500/00

				FOREIG	N PATENT DOCU	IMENTS		
Examiner	Cite	Fore	eign Patent Do	cument	Name of Patentee	Date of Publication of	Pages, Columns, Lines, Where Relevant	
Initials*	No.1	Office ³	Number ⁴	Kind Code ⁵ (<i>if known</i>)	or Applicant of Cited Document	Cited Document MM-DD-YYYY	Passages or Relevant Figures Appear	⊤್
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MFORMATION DISCLOSURE STATEMENT BY APPLICANT

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Complete if Known **Application Number** 09/350,401 Filing Date July 8, 1999 **First Named Inventor** Group Art Unit 1644

Examiner Name R. Schwadron

Sheet of 5 Attorney Docket Number 018623-013910US

		OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS	
Examiner Initials *	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
	AU	Alexander et al., "Derivation of HLA-A11/K ^b Transgenic Mice" The Journal of Immunology (1997) 159: 4753-4761	
	AV	Alexander, et al. "The Optimization of Helper T Lymphocyte (HTL) Function in Vaccine Development" <u>Immunological Research</u> (1998) 18 (2) 79-92.	
	AW	Ando et al., "Mechanisms of Class I Restricted Immunopathology. A Transgenic Mouse Model of Fulminant Hepatitis" J. Exp. Med. (1993) 178: 1541-1554	
	AX	Barnaba et al., "Selective Killing of Hepatitis B Envelope Antigen-specific B cells by Class I-restricted, Exogenous Antigen-specific T Lymphocytes" Nature (1990) 345 258-260	
•	AY	Bertoletti et al., "Definition of a Minimal Optimal Cytotoxic T-Cell Epitope Within the Hepatitis B Virus Nucleocapsid Protein" <u>Journal of Virology</u> (1993) 67(4): 2376-2380	
	AZ	Bertoletti et al., "Natural Variants of Cytoxic Epitopes are T-cell Receptor Antagonists for Antiviral Cytotoxic T Cells" Nature (1994) 369: 407-410	
	AAA	Bertoletti et al., "HLA Class I-restricted Human Cytotoxic T Cells Recognize Endogenously Synthesized Hepatitis B Virus Nucleocapsid Antigen" Proc. Natl. Acad. Sci. USA (1991) 88: 10445-10449	
	AAB	Bertoni et al., "Human Histocompatibility Leukocyte Antigen-binding Supermotifs Predict Broadly Cross-reactive Cytotoxic T Lymphocyte Responses in Patients with Acute Hepatitis" J.Clin. Invest. (1997) 100(3): 503-513	
	AAC	Borras-Cuesta et al., "Engineering of Immunogenic Peptides by Co-linear Synthesis of Determinants Recognized by B and T Cells" Eur. J. Immunol. (1987) 17: 1213-1215	
	AAD	Bhatnagar et al., "Immune Response to Synthetic Peptide Analogues of Hepatitis B Surface Antigen Specific for the a Determinant" Proc. Natl. Acad. Sci. USA (1982) 79: 4400-4404	
	AAE	Celis et al., "Recognition of Hepatitis B Surface Antigen by Human T Lymphocytes" The Journal of Immunology (1988) 140: 1808-1815	
	AAF	Chisari, "Hepatitis B Virsu Immunopathogenesis" Annu. Rev. Immunol. (1995) 13: 29-60	
	AAG	del Guercio et al., Binding of a Peptide Antigen to Mutiple HLA Alleles Allows Definition of an A2-Like Supertype" The Journal of Immunology (1995) 154: 685-693	

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Sheet 4 of 5

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Application Number	09/350,401	MECE
Filing Date	July 8, 1999	
First Named Inventor		Alic o
Group Art Unit	1644	T = a.
Examiner Name	R. Schwadron	TECH CENTER
Attorney Docket Number	018623-013910U	s

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Examiner Initials *	Cite No.1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	Ť ²
	AAH	Deres et al., "In Vivo Priming of Virus-specific Cytotoxic T Lymphocytes with Synthetic Lipopeptide Vaccine" Nature (1989) 342: 561-564	
	AAI	Fayolle et al., "In Vivo Induction of Cytotoxic T Cell Response by a Free Synthetic Peptide Requires CD4 ⁺ T Cell Help" The Journal of Immunology (1991) 147 4069-4073	
,	AAJ	Ferrari et al., "Identification of Immunodominant T Cell Epitopes of the Hepatitis B Virus Nucleocapsid Antigen" J. Clin. Invest. (1991) 88: 214-222	
	AAK	Fujii, et al., "Synthesis of Peptide Fragments of Hepatitis B Virus Surface Antigen (HBsAg) and Their Immunogenicity" Peptide Chemistry (1983), E.Munekata(Ed.) 215-220	
-	AAL	Hayashi et al., "Studies on Peptides, CLXVI. Solid-Phase Syntheses and Immunological Properties of Fragment Peptides Related to Human Hepatitis B Virus Surface Antigen (HBsAg) and Its Pre-S2 Gene" Chem. Pharm. Bull. (1988) 36(12): 4993-4999	
	AAM	Hopp, "Immunogenicity of a Synthetic HBsAg Peptide Enhancement by Conjugation to a Fatty Acid Carrier" Molecular Immunology (1984) 21(1): 13-16	
	AAN	Ishioka et al., "Class I MHC-restricted, Peptide-specific Cytotoxic T Lymphocytes Generated by Peptide Priming In Vivo" <u>Vaccines 90</u> (1990) Cold Springs Harbor Laboratory Press pp. 7-11	
	AAO	Kondo et al., "Prominent Roles of Secondary Anchor Residues in Peptide Binding to HLA-A24 Human Class I Molecules" The Journal of Immunology (1995) 155: 4307-4312	
	AAP	Lerner et al., "Chemically Synthesized Peptides Predicted From the Nucleotide Sequence of the Hepatitis B Virus Genome Elicit Antibodies Reactive with the Native Envelope Protein of Dane Particles" Proc. Natl. Acad. Sci. USA (1981) 78(6) 3403-34-7	
	AAQ	Milich, "Probing T Cell Antigen Recognition: Use of Synthetic Peptides" Peptide Research (1990) 3(2): 85-96	
	AAR	Milich et al., "Immune Response to Hepatitis B Virus Core Antigen (HBcAg): Localization of T Cell Recognition Sites Within HBcAg/HBeAg "The Journal of Immunology (1987) 139(4): 1223-1231	
	AAS	Nayersina et al., "HLA A2 Restricted Cytotoxic T Lymphocyte Responses to Multiple Hepatitis B Surface Antigen Epitopes During Hepatitis B Virus Infection" The Journal of Immunology (1993) 150(10): 4659-4671	

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		OTHER PRIOR ART NON PATENT LITERATURE DOCUMENTS	
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T 2
	AAT	Penna et al., "Hepatitis B Virus (HBV)-Specific Cytotoxic T-Cell (CTL) Response in Humans: Characterization of HLA Class II-Restricted CTLs That Recognize Endogenously Synthesized HBV Envelope Antigens" <u>Journal of Virology</u> (1992) 66(2): 1193-1198	
	AAU	Penna et al., "Cytotoxic T Lymphocytes Recognized an HLA-A2-restricted Epitope Within the Hepatitis B Virus Nucleocapsid Antigen" J. Exp. Med. (1991) 174: 1565-2570	
	AAV	Rehermann et al., "The Cytotoxic T Lymphocyte Response to Multiple Hepatitis B Virus Polymerase Epitopes During and After Acute Viral Hepatitis" The Journal of Experimental Medicine (1995) 181: 1047-1058	
	AAW	Ruppert et al., "Prominent Role of Secondary Anchor Residues in Peptide Binding to HLA-A2.1 Molecules" Cell (1993) 74: 929-937	
	AAX	Sallberg et al., "Human and Murine B-cells Recognize the HBcAg/BETA (or Hbe2) Epitope as a Linear Determinant" Molecular Immunology (1991) 28(7): 719-726	
	AAY	Sette et al., "The Relationship Between Class I Binding Affinity and Immunogenicity of Potential Cytotoxic T Cell Epitopes" The Journal of Immunology (1994) 153:5586-5592	
	AAZ	Sidney et al., "Specificity and Degeneracy in Peptide Binding to HLA-B7-Like Class I Molecules" The Journal of Immunology (1996) 157: 3480-3490	
	AAAA	Toes, et al. "Enhancement of Tumor Outgrowth Through CTL Tolerization After Peptide VAccination is Avoided by Peptide Presentation on Dendritic Cells" <u>Journal of Immunology</u> (1998) 160:4449-4456	
-	AAAB	Wakita et al., "Gamma-Interferon Production in Response to Hepatitis B Core Protein and Its Synthetic Peptides in Patients with Chronic Hepatitis B Virus Infection" <u>Digestion</u> (1990) 47: 149-155	

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EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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		Examiner Name	R. Schwadron TECH CENTER 160
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	ENCLO	OSURES (check all that apply)	
Fee Transmittal Form		ment Papers Application)	After Allowance Communication to Group
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Amendment / Response	Licensi	ng-related Papers	Appeal Communication to Group (Appeal Notice, Brief, Reply Brief)
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Individual name Jean M. Lockyer	A /	Reg N	No. 44,879
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